IN THE CLAIMS:

For the Examiner's convenience, all of the claims pending in this application, whether amended or not, are set forth below.

Please amend Claim 32, and add new Claims 45-61, to read as follows. A marked-up copy of the amended claim, showing the change made thereto, is attached.

1. (Not Changed From Prior Version) A substrate structure which is a precursor to an electron source, and on which an electron emission device of the electron source is to be disposed, the electron emission device including at least a conductive film, said substrate structure comprising:

a substrate containing Na;

a first layer containing SiO_2 as a main component formed directly or indirectly on said substrate; and

a second layer containing an electron conductive oxide formed directly or indirectly on said substrate,

wherein said first and second layers are disposed adjacent a side of said substrate where the electron emission device is to be disposed.

2. (Not Changed From Prior Version) The substrate structure according to claim 1, wherein said first layer is formed on said substrate containing Na, and said second layer is formed on the first layer.

3. (Not Changed From Prior Version) The substrate structure according to claim 2, wherein said second layer contains SiO_2 as its ingredient.

4. (Not Changed From Prior Version) The substrate structure according to claim 2, wherein said first layer contains at least one kind of element to be selected from an element group comprising P, B, and Ge.

5. (Not Changed From Prior Version) The substrate structure according to claim 3, wherein said first layer contains at least one kind of element to be selected from an element group comprising P, B, and Ge.

10. (Not Changed From Prior Version) The substrate structure according to any of claims 1 through 5, wherein the conductive film has an electron emission portion which is disposed on said first or second layer, and said electron emission device also includes a pair of electrodes connected with the conductive film.

11. (Not Changed From Prior Version) An electron source comprising:

a substrate structure according to any one of claims 1 through 5; and

the electron emission device disposed on said first layer or said second layer of the substrate structure.

12. (Not Changed From Prior Version) An electron source comprising:

a substrate structure according to any one of claims 1 through 5; and

a plurality of electron emission devices disposed on said first layer or said second layer of the substrate structure.

13. (Not Changed From Prior Version) An electron source comprising:

a substrate structure according to any one of claims 1 through 5; and

a plurality of electron emission devices disposed on said first layer or said second layer of the substrate structure; and

a plurality of row direction wirings and a plurality of column direction wirings in which the plurality of electron emission devices are matrix-wired.

14. (Not Changed From Prior Version) The electron source according to claim 11, wherein said conductive film has an electron emission portion which is disposed on said first or second layer, and said electron emission device also includes a pair of electrodes connected with the conductive film.

15. (Not Changed From Prior Version) The electron source according to claim 12, wherein the conductive film has an electron emission portion which is disposed on said first or second layer, and said electron emission device also includes a pair of electrodes connected with the conductive film.

16. (Not Changed From Prior Version) The electron source according to claim 13, wherein the conductive film has an electron emission portion which is disposed on said first or second layer, and said electron emission device also includes a pair of electrodes connected with the conductive film.

17. (Not Changed From Prior Version) An image forming apparatus comprising:

an electron source according to claim 11; and

an image forming member to form an image with irradiation of electrons emitted from the electron source.

18. (Not Changed From Prior Version) An image forming apparatus comprising:

an electron source according to claim 12; and

an image forming member to form an image with irradiation of electrons emitted from the electron source.

19. (Not Changed From Prior Version) An image forming apparatus comprising:

an electron source according to claim 13; and

an image forming member to form an image with irradiation of electrons emitted from the electron source.

20. (Not Changed From Prior Version) An image forming apparatus comprising:

an electron source according to claim 14; and

an image forming member to form an image with irradiation of electrons emitted from the electron source.

21. (Not Changed From Prior Version) An image forming apparatus comprising:

an electron source according to claim 15; and

an image forming member to form an image with irradiation of electrons emitted from the electron source.

22. (Not Changed From Prior Version) An image forming apparatus comprising:

an electron source according to claim 16; and

an image forming member to form an image with irradiation of electrons emitted from the electron source.

32. (Amended) A substrate structure which is a precursor to an electron source, and on which an electron emission device of the electron source is to be disposed, the electron emission device including at least a conductive film, said substrate structure comprising:

a substrate;

a first layer containing SiO_2 as a main component formed directly or indirectly on said substrate; and

a second layer containing electron conductive oxide formed directly or indirectly on said substrate.

33. (Not Changed From Prior Version) The substrate structure according to claim 32, wherein said first layer is formed on said substrate, and said second layer is formed on the first layer.

34. (Not Changed From Prior Version) The substrate structure according to claim 33, wherein said second layer contains SiO_2 as its ingredient.

35. (Not Changed From Prior Version) The substrate structure according to claim 33, wherein said first layer contains at least one kind of element to be selected from an element group comprising P, B and Ge.

36. (Not Changed From Prior Version) The substrate structure according to claim 34, wherein said first layer contains at least one kind of element to be selected from an element group comprising P, B and Ge.

37. (Not Changed From Prior Version) The substrate structure according to claim 32, wherein said second layer is formed on said substrate, and said first layer is formed on the second layer.

38. (Not Changed From Prior Version) The substrate structure according to claim 37, wherein said second layer contains SiO_2 as its ingredient.

39. (Not Changed From Prior Version) The substrate structure according to claim 37, wherein said first layer contains at least one kind of element to be selected from an element group comprising P, B and Ge.

40. (Not Changed From Prior Version) The substrate structure according to claim 38, wherein said first layer contains at least one kind of element to be selected from an element group comprising P, B and Ge.

41. (Not Changed From Prior Version) The substrate structure according to any of claims 32 through 40, wherein the conductive film has an electron emission portion which is disposed on said first or second layer, and the electron emission device also includes a pair of electrodes connected with the conductive film.

42. (Not Changed From Prior Version) An electron source comprising:

a substrate structure according to any one of claims 32 through 40;

and

the electron emission device disposed on said first layer or said second layer of the substrate structure.

43. (Not Changed From Prior Version) An electron source comprising:

a substrate structure according to any one of claims 32 through 40;

and

a plurality of electron emission devices disposed on said first layer or said second layer of the substrate structure.

44. (Not Changed From Prior Version) An electron source comprising:

a substrate structure according to any one of claims 32 through 40;

and

a plurality of electron emission devices disposed on said first layer or said second layer of the substrate structure; and

a plurality of row direction wirings and a plurality of column direction wirings in which the plurality of electron emission devices are matrix-wired.

--45. (New) The substrate structure according to claim 1, wherein said second layer is formed on said substrate containing Na, and said first layer is formed on the second layer.

46. (New) The substrate structure according to claim 45, wherein said second layer contains SiO_2 as its ingredient.

47. (New) The substrate structure according to claim 45, wherein said first layer contains at least one kind of element to be selected from an element group comprising P, B, and Ge.

48. (New) The substrate structure according to claim 46, wherein said first layer contains at least one kind of element to be selected from an element group comprising P, B, and Ge.

49. (New) The substrate structure according to any of claims 45 through 48, wherein the conductive film has an electron emission portion which is disposed on said first or second layer, and said electron emission device also includes a pair of electrodes connected with the conductive film.

50. (New) An electron source comprising:

a substrate structure according to any one of claims 45 through 48; and

the electron emission device disposed on said first layer or said second layer of the substrate structure.

51. (New) An electron source comprising:

a substrate structure according to any one of claims 45 through 48; and

a plurality of electron emission devices disposed on said first layer or said second layer of the substrate structure.

52. (New) An electron source comprising:

a substrate structure according to any one of claims 45 through 48; and

a plurality of electron emission devices disposed on said first layer or said second layer of the substrate structure; and

a plurality of row direction wirings and a plurality of column direction wirings in which the plurality of electron emission devices are matrix-wired.

53. (New) The electron source according to claim 50, wherein said conductive film has an electron emission portion which is disposed on said first or second layer, and said electron emission device also includes a pair of electrodes connected with the conductive film.

54. (New) The electron source according to claim 51, wherein the conductive film has an electron emission portion which is disposed on said first or second

layer, and said electron emission device also includes a pair of electrodes connected with the conductive film.

55. (New) The electron source according to claim 52, wherein the conductive film has an electron emission portion which is disposed on said first or second layer, and said electron emission device also includes a pair of electrodes connected with the conductive film.

56. (New) An image forming apparatus comprising:

an electron source according to claim 50; and

an image forming member to form an image with irradiation of electrons emitted from the electron source.

57. (New) An image forming apparatus comprising:

an electron source according to claim 51; and

an image forming member to form an image with irradiation of electrons emitted from the electron source.

58. (New) An image forming apparatus comprising:

an electron source according to claim 52; and

an image forming member to form an image with irradiation of electrons emitted from the electron source.

59. (New) An image forming apparatus comprising:

an electron source according to claim 53; and

an image forming member to form an image with irradiation of electrons emitted from the electron source.

60. (Not Changed From Prior Version) An image forming apparatus comprising:

an electron source according to claim 54; and

an image forming member to form an image with irradiation of electrons emitted from the electron source.

61. (Not Changed From Prior Version) An image forming apparatus comprising:

an electron source according to claim 55; and

an image forming member to form an image with irradiation of electrons emitted from the electron source.--

REMARKS

This application has been reviewed in light of the Office Action dated August 13, 2002. Claims 1-5, 10-22 and 32-61 are now presented for examination. Claim 32 has been amended to define still more clearly what Applicants regard as their invention. New Claims 45-61 have been added to provide Applicants with a more complete scope of